



FIXED SYSTEM FOR DIOXINS SAMPLING ON STACK EMISSIONS

DECS

Dioxin Emission Continuous Sampling

System Features:

- Micropollutants sampler (PCDD/Fs, PCB, PAH) with Filter/Condenser method and adsorbing trap on the wet gas in accordance with EN 1948 and USEPA 23 methods;
- Up to 4 Sampling Units can be managed by a single Control Unit;
- Distance between Sampling and Control Units can be up to 100 mt;
- Fully automated sampling: no operator presence required;
- Automatic preparation and cleaning;
- Full remote control via Internet or Intranet;
- DECS can be easily upgraded using the heated probe without stack box for solid phase and side sampling for gas phase such as for Heavy Metals, Hg and HCL.

Decs is an automatic sampling system, engineered for permanent installation on stacks, dedicated to "long terms" Dioxins and Furans collection (PCDD/PCDF) and other POP's.

DECS is composed by 2 units:

- Control Unit
- Sampling Unit

Control Unit

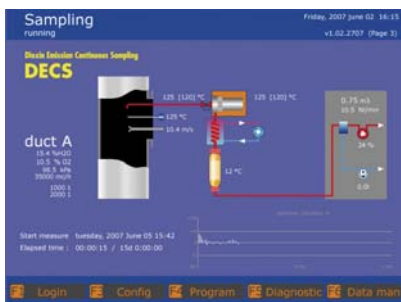
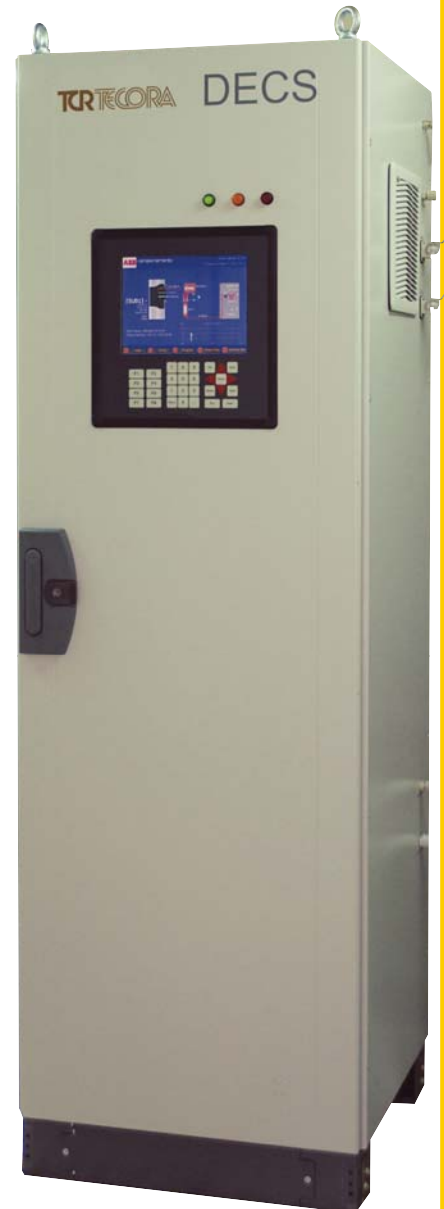
The Control Unit is the interface between the sampling unit and the operator who leads all the system function; it is generally placed in a safe area easily reachable.

Realized in an industrial cabinet, it is connected to the sampling unit through electrical and pneumatic connections.

Built-in measurement and control devices, useful to guarantee an automatic measurement execution according to official methods. The available interfaces are a LCD 10" screen, a keyboard, a printer and a Internet/Ethernet connection.

The high automation of the system allows to begin the measurement through the START option, which can be activated via Internet or Intranet as well.

At the end of the measurement, a summary report containing all necessary elements to calculate the concentrations and the subjective valuation of the measurement quality is produced; it is also available a continuous





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registration of the main parameters and anomalous situations.

The control unit is designed and built to satisfy the following specifications:

- Full automatic isokinetic control
- Automatic control of temperature and sample conditioning
- Automatic Leak Test
- Accurate sampled volume measurement
- Up to 8 weeks period of continuous sampling
- Graphic interface managed by a self-driven software
- Data logger
- Internet/Ethernet connection
- Four analog inputs
- Input signal concerning the process operation status
- Fault system status output signal
- Power supply: 220 V AC 50 Hz 16 A
- Air supply: 6 bar, oil free
- Dimensions: 600x1800x600 mm (WxHxD)
- Weight: 140 Kg

Accessories:

- Forced cooling system
- Filter device choice for low or high concentrations
- Spare XAD2 cartridge
- Stack velocity measurement

Sampling Unit

The Sampling Unit is the part installed on the stack sampling point and is responsible for the sample extraction, without altering its composition, and collecting the solid and gas phases on the appropriate device.

Sampling unit is composed by:

- Heated Probe with interchangeable nozzle
- Heated box for filterholder
- Condensing system
- Adsorbing trap for XAD2
- Pitot tube

Process Characteristics:

- Stack velocity range: 3 ÷ 40 m/s
- Stack Temperature: max 350° C
- Water content: max 40% in volume
- Up to 8 weeks period of continuous sampling

The sampling unit has been designed according to the following requests:

- Ready to work in any moment
- No need to put in or out the stack for each sampling
- Particulate collecting filter enclosed in a heated box
- Easy substitution of filterholder cartridge, adsorbing trap and collecting device
- Made of Glass or Titanium
- Designed for outdoor mounting
- Applicable with DN 150 (on request DN 100) sampling port
- Dimensions: 600x700x350 mm (WxHxD)
- Weight: 37 Kg

